Claims

1. A method of digitally representing video data comprising generating analog values representing luminosity of pixels of a detected scene, converting said analog values to digital values, wherein luminosity at mid point between maximum and minimum luminosity is represented with a value of zero and representing other luminosities as plus or minus differences in the luminosity from said mid point.

2. A method as recited in claim 1 wherein the least significant bit of a first luminosity value of a block of adjacent pixels having luminosities on the same side of said mid pint represents the sign of the luminosity of all the pixels of said block.

3. A video system comprising a video camera means to detect analog values to represent color separations of pixels of a scene being televised and to generate analog values representing the gray scale luminosity of said scene, means to convert said analog values to digital values to generate sets of digital values representing color separations of said scene in pixel form, and to generate digital values representing the gray scale luminosity of said scene in pixel form, and a Video accumulator Array Memory (VAM) storing said digital values.

4. A color video system as recited in claim 3, wherein means are provided to illuminate said scene with infrared light so that said gray scale luminosity values include a component corresponding to said infrared illumination of said scene.

5. A video conferencing system comprising video camera means to generate video data representing pixels of a digital scene, a first combination memory structure and register to store pixel values representing pixels of said scene at a current frame time, said pixels being bit mapped in said first memory structure and register in accordance with said scene, a second register connected to store pixel values representing said scene at a second frame time prior to said current frame time, said pixel values being bit mapped in said second register in accordance with said scene, a third register connected to store the mathematical operation results between the corresponding pixel values in said first register and said second register, wherein said third register stores values representing the temporal changes in said pixel values.

6. A video conferencing system as recited in claim 5, further comprising a fourth register connected to store the mathematical operation results stored in said third register at a previous frame time to the frame time of the mathematical result values stored in said third register, a fifth register connected to store the mathematical results between the corresponding values stored in said fourth register and said fifth register.

7. A system as recited in claim 6, further comprising a sixth register for storing mathematical factors corresponding to criteria from a processing algorithm and a flag register connected to store a flag when a value stored in said fifth register exceeds the corresponding factor stored in said sixth register.

8. A system for video conferencing as recited in claim 6, further comprising means to transmit video data representing said scene with a radix control output in accordance and with the associated flags stored in said flag register.

9. A system for video conferencing as recited in claim 6 further comprising means to transmit video data representing said scene for only these pixels which meet the processor set criteria set and stored in said seventh register.

10. A system for video conferencing as recited in claim 9 further comprising means to select which register will output processed data in automatic operation and the radix of said register in automatic operation

11. A system for video conferencing as recited in claim 11 wherein said VAM has multiple ports for input and output of memory independently of register and flag signal lines.